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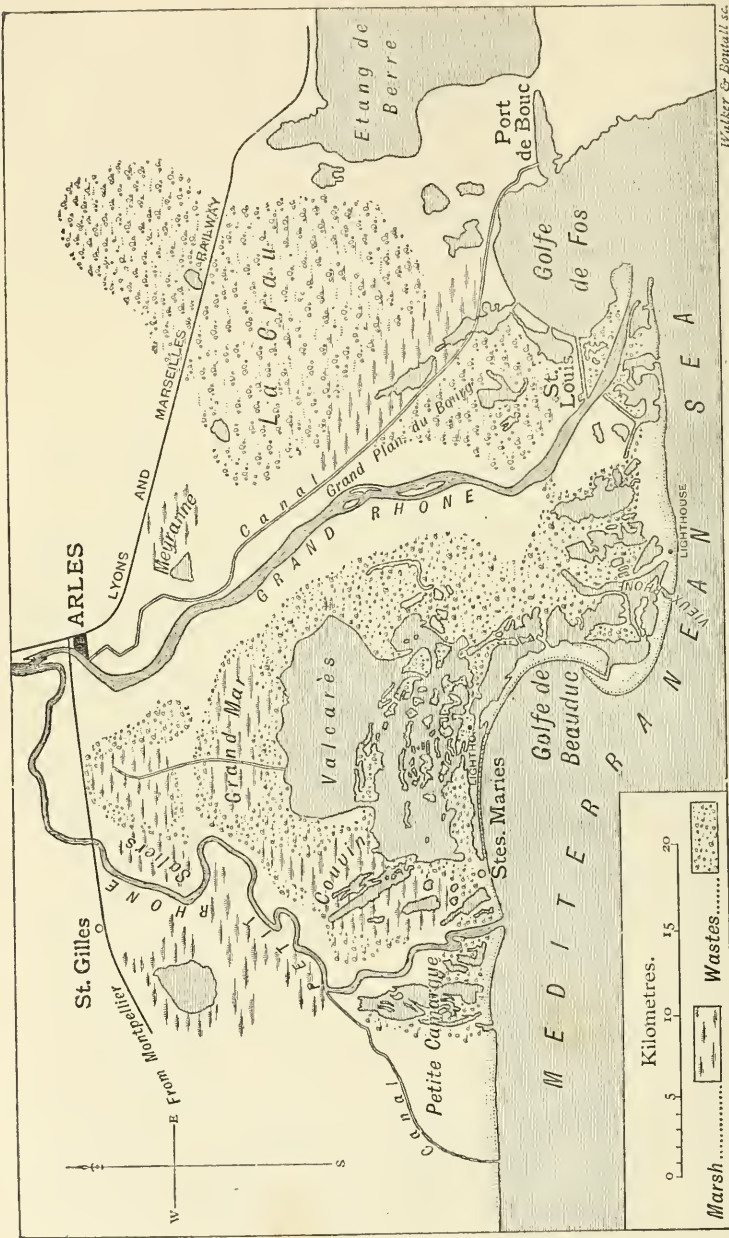
SEVENTH SERIES.

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XLI.—*On the Ornithology of the Delta of the Rhone.*

By WM. EAGLE CLARKE, F.L.S. (Second Contribution.)

DURING a visit to the Delta of the Rhone in May and the early part of June 1894 (*cf.* *Ibis*, 1895, pp. 173–211), Mr. T. G. Laidlaw and I were much impressed with the number of birds of passage—most of them of species breeding in the high north—which, in spite of the lateness of the season, lingered on the margins of the lagoons and étangs bordering the Mediterranean. This evidence of migratory movements of considerable importance and interest, as well as the fact that the Rhone Valley is recognized to be a much-traversed route, suggested to us the desirableness of an autumn visit for the purpose of witnessing the phenomenon of migration at a season more favourable for its observation. With this end in view we spent some weeks in September 1896 in making observations in the vast areas of waste and lagoon, marsh and étang of the Camargue, on the margin of the two Rhones, and on the shores of the Mediterranean—which latter form the base of the Delta. During these investigations, we not only obtained much information bearing upon the main object of our visit, but we also added considerably to our former personal knowledge of the avifauna of the region, and made some further notes on a few of the more interesting species which haunt these singular solitudes.



MAP OF THE DELTA OF THE RHONE.

The results obtained regarding the migratory movements were highly satisfactory. Even during our brief sojourn, a considerable number of species, and hosts of individuals, of birds which summer and nest in Northern and Central Europe were observed traversing the Lower Rhone Valley as birds of passage, most of them to rest on the shores of the Mediterranean, before passing still further south to their accustomed winter-quarters. Among others were the Fire-crest, Starling, Goshawk, Osprey, Pintail, Teal, Wigeon, Stock-Dove, Great Snipe, Common Sandpiper, Green Sandpiper, Wood-Sandpiper, Spotted Redshank, Greenshank, and Black-tailed Godwit.

In addition to the boreal and infra-boreal birds just enumerated, a number of species which nest in Northern and Central France and elsewhere, but which are not summer visitants to the Bouches-du-Rhône, were noted passing southward as emigrants in the Delta and its neighbourhood. These were the Wheatear, Whinchat, Redstart, Willow-Warbler, Pied Flycatcher, Spotted Flycatcher, Nightjar, Sparrow-Hawk, Common Heron, Shoveler, Land-Rail, and Curlew.

In addition, again, to the strictly transient visitors above mentioned, the ranks of a number of species which are summer birds in Provence, including the Delta and district, were largely recruited by migrants from more northern provinces and countries, and these, along with the summer visitors of the same species to the Bouches-du-Rhône, joined forces in the general movement southward. The White-throat, Blue-headed Wagtail, Swallow, Martin, Sand-Martin, Wryneck, Hobby, Kestrel, Mallard, Garganey, Quail, and Redshank may be mentioned, among others, as of this group.

The tamarisk-bushes, which flourish in the arid saline region of the southern portion of the Camargue and which are eminently birdless during the summer months, were now alive with Redstarts, Warblers, and other Passerines; and it was here that we made most of our observations on the movements of the birds of this order. In this desert-region, too, we saw the Hobby, Kestrel, and Sparrow-Hawk as emi-

grants, and in the étangs were Ospreys and numerous Ducks and Waders. Owing to an unusually droughty season, the lagoons of the Camargue had become much reduced in area, and saline to an extreme degree. The consequence was that migratory Waders did not frequent their shores, as they did in May 1894, but selected the margins of the freshwater étangs, on which they were very numerous.

Certain species of the *Limicolæ*—the Knot, Grey Plover, and others—do not arrive in the Delta until late in the season; not indeed until the approach of winter cold drives them thus far south, and this accounts for the absence of several species from our notes. There can be no doubt that numerous other species, the Thrush and Redbreast for instance, not seen by us in September, appear on passage, or as winter visitors, or as both, during October, and even later.

Some of the summer visitors to the Delta and its vicinity had taken their departure prior to mid-September. Thus, on our arrival at Arles on the 14th of that month, we at once missed the Swifts, which during the summer are so surprisingly abundant, on account, no doubt, of the multiplicity and congeniality of the nesting-haunts afforded by the ancient Roman buildings for which that old-world town is famous. The Swift is well known as an early emigrant, so that its entire departure from the shores of the Mediterranean by the date named is not altogether surprising.

This, however, was not the only bird of summer that we missed in our peregrinations in the Camargue. The Hoopoe, which we saw daily in May 1894, and which was certainly the commonest species that then came under our notice, had also emigrated. Another conspicuous and everyday bird during our former visit, namely the Lesser Grey Shrike, had likewise departed, and not one did we see, though insect-life was astonishingly abundant. Again, the Black-throated Wheatear and the Great Reed-Warbler were not observed, and had presumably, deserted their summer-haunts. On the other hand, several species which are winter visitors to the Midi—such as the Starling, Firecrest, Stock-Dove, Wigeon,

Shoveler, Pintail, Teal, &c.—had already arrived in the Delta.

During our sojourn we observed examples of a number of species which had not come under our notice in the spring of 1894. These additions to our former list are most of them seasonal visitors, and will be particularized in the systematic portion of this contribution by being marked with an asterisk. It is almost needless to remark that a number of the birds mentioned in the former paper again came under observation; but, since nothing new is required to be said concerning them, they have been omitted from further consideration here.

It may not form an unfitting conclusion to this portion of my contribution to allude to the great changes that have been wrought, and those that are in active progress, in the Camargue. Once the entire surface of the vast triangular Delta—some 400 square miles in area—was entirely in a virgin condition, and then marsh and étang flourished in the north of this wild region, while in the south vast areas of desert and lagoon extended to the Mediterranean. In those palmy days, from an ornithologist's point of view, the Camargue was undoubtedly one of the greatest metropolises of aquatic bird-life in Europe. The reclaimer, however, has long ago transformed much of its northern fastnesses, and now vineyards and cornfields are to be found in their stead. Great marshes, it is true, still remain there, but they have been deprived of much of their seclusion, while an elaborate system of drainage is gradually sapping their luxuriance. There are still in places, nevertheless, perfect forests of reeds, but these are now chiefly tenanted in the summer by aquatic Warblers, and their margins during the periods of migration afford feeding-grounds for certain Waders, but are otherwise unimportant as bird-resorts, though they once, it is said, harboured among others the Sea-Eagle and the beautiful "Poule sultane" (*Porphyrio cœruleus*) as breeding species.

The most interesting étangs and marshes are now to be found in the south-west. Here some extensive étangs are

very attractive to the Anatidæ, not only during the seasons of passage, but they also afford breeding-haunts for such interesting species as the Red-ersted Pochard and possibly the Pintail. There are reed-beds and marshy tracts fringing these étangs which are tenanted by a number of interesting birds, such as the Bearded Reedling, Great Sedge-Warbler, Marsh-Harrier, Purple Heron, and the Coot, the last being quite a rare bird in the Midi. These étangs and marshes, however, are a mere remnant, both as regards their extent and their bird-life.

The southern region is entirely impregnated with salt, and consists of wastes clothed with salt-loving herbage, and shallow lagoons of remarkably saline water. This vast area of desert—it is nothing else—has baffled reclamation by the agriculturist for these very reasons. Yet its singular adaptation for the production of salt now threatens with destruction its most characteristic bird, the Flamingo, a species that has many charms for the naturalist. To the south-east of the Delta there flourishes an extensive Saline; and now, in addition, there have been erected very extensive premises for the extraction of the valuable iodides and bromides from the raw salt so abundantly produced. These combined industries give employment to some 2000 hands, and are close to one of the colonies of Flamingoes that pass the summer in the Camargue. It is not at all likely that these birds can flourish long with such a human population as their immediate neighbours.

On the other hand, in the south-west, where the second herd of Flamingoes have their head-quarters, on the Great Étang de Valcarès, the march of cultivation has already reached its northern shore. But this is not all. A singular character, one Marius, a barber visiting Arles to shave the country-folk on Sundays, and a recluse dwelling in a lonely cabane on the east side of this étang during the remainder of the week, takes a heavy toll of the eggs, which are laid within sight of his retreat.

Eneroachments and persecutions such as these must soon work changes on this, the most remarkable, and at the same

time one of the most restricted as regards its range, of European birds. That they are doomed in this, their only retreat in France, is certain, for on neither visit did we observe young birds—not even in September 1896—though we saw scores of nests which had evidently been built that season. The Flamingo, however, is a mere survival of the former ornithological glory of the Camargue. Even this relic must soon for ever pass away, though the lagoons and wastes will remain for long years to come as mementoes of this ancient metropolis of bird-life, and of the remarkable bird which was once its chief ornament.

Frequent reference will be made in the succeeding portion of this contribution to the statements of Jaubert and Barthélemy-Lapommeraye, and contained in their useful work entitled 'Les Richesses ornithologiques du Midi de la France' (1859-61).

TURDUS VISCIVORUS.

We again saw the Mistle-Thrush, in some numbers, in the northern portion of the Camargue and in the neighbourhood of Arles, and it is undoubtedly a breeding species. This bird is mentioned here for the purpose of quoting a statement made in 'Les Richesses' (p. 204) that many nest in the Departments of Var and Basses-Alpes (*i. e.* in the highlands of Provence), which implies that it does not breed in the low country of the Bouches-du-Rhône.

SAXICOLA GENANTHE.

The Wheatear was extraordinarily abundant on passage, and was observed throughout the Camargue during the latter half of September, and probably throughout that month. It was an object of much attention from the sportsmen of Arles, to whom the "cul-blanc" seemed to be a favourite "game-bird," and many hundreds were shot to our knowledge in September 1896. This species is a bird of double passage in the Midi.

*RUTICILLA PHÆNICURUS.

The Redstart is a bird of passage only in the South of

France, and was observed by us in great numbers throughout the Delta, especially among the tamarisk-scrub in the arid region adjoining the Mediterranean. The movement of this species southwards appeared to be at its height during the latter half of September. As this bird is strictly a transient visitor in the Midi, it did not come under our notice in May and June 1894.

PRATINCOLA RUBETRA.

A few Whinchats were seen in the southern portion of the Camargue. It is probably only a bird of passage in the Bouches-du-Rhône, though Jaubert and Barthélemy-Lapommeraye (p. 225) state that a small number stop to nest in the Midi.

SYLVIA CURRUCA.

The Lesser Whitethroat was common enough among the tamarisk-shrubs in the arid region of the Camargue bordering the Mediterranean, where several were shot for identification. Nevertheless, in 'Les Richesses' (p. 243) it is said that the bird is not common in Provence either in summer or on migration.

SYLVIA CINEREA.

The Whitethroat was observed on passage in great abundance among the tamarisks in the south of the Delta.

SYLVIA ATRICAPILLA.

The Blackcap, another common summer bird in the region, was observed in much recruited numbers as an emigrant.

PHYLLOSCOPUS TROCHILUS.

The Willow-Warbler is a bird of passage only in the Bouches-du-Rhône. It was one of the very commonest migrants that came under notice, and was seen everywhere in the Delta, especially among the tamarisks near the Mediterranean, in which this bird literally swarmed during the period of our visit. In 'Les Richesses' (p. 267) it is considered doubtful if this species nests in Provence. A certain number, however, remain during the winter.

ACROCEPHALUS TURDOIDES.

We did not observe the Great Reed-Warbler, a bird which was so much in evidence and also so abundant at the time of our previous visit. It may, however, have escaped our notice, for Jaubert and Barthélemy-Lapommeraye (p. 259) say that it is resident in the Camargue.

The Reed-Warbler (*Acrocephalus streperus*) was quite abundant throughout our visit.

CETTIA CETTII.

In my former remarks on Cetti's Warbler, doubt was expressed as to whether the remarkable notes of this bird were to be regarded as a song or an alarm-cry, and an opinion was expressed in favour of the latter view. The observations made in the autumn all tended to confirm this impression. At that season other birds are usually silent: not so *C. cettii*, for on each occasion on which we approached its haunts—dense covert by the waterside—there was the same outburst of the identical notes which had impressed us so much in the spring. The authors of 'Les Richesses' (p. 25) say that its voice, well known to those who frequent the marshes, is short, but powerful and sonorous, and that the male utters it all the year round. Possibly it may be the song of an exceptionally timid species, and is uttered on occasions of excitement—such as intrusion upon its haunts—at all seasons, and is thus a combination, as it were, of an alarm-cry and a song.

*REGULUS IGNICAPILLUS.

We saw only a single example of the Fire-crested Wren, a remarkably confiding male, which allowed himself to be inspected at close quarters. This bird was observed in a dense willow-break, on the banks of the Grand Rhône, on the 17th of September. According to the authors of 'Les Richesses' (p. 192), this bird is an autumn and winter visitant to the Midi.

*ACREDULA CAUDATA.

Several Long-tailed Tits, probably a family-party, were

seen among the trees fringing the west bank of the Grand Rhône on the 17th of September. We did not observe this bird in the spring of 1894, and it is probably not common as a resident species in the Bouches-du-Rhône. Jaubert and Barthélemy-Lapommeraye say (p. 187) concerning it in Provence, that it is to be found commonly in the Basses-Alpes and that portion of the Var which is distant from the coast; in other words, in the elevated districts of Provence.

**PARUS CÆRULEUS.*

The Blue Tit is another uncommon species in the low-lying country of the Delta and its neighbourhood, and is also an addition to our former list of birds observed in the region. We only saw it once, and then among the trees of the northern and cultivated district of the Camargue. Like the last-named species, Jaubert and Barthélemy-Lapommeraye (p. 182) only mention it for the highlands of the Basses-Alpes and the Var.

ÆGITHALUS PENDULINUS.

The Penduline Tit proved to be a very common species among the trees on the banks of the canals on the eastern fringe of the Delta, where we found it nesting in 1894. In the autumn of 1896, these birds were to be seen in family-parties of some eight individuals, and were busily searching for insect-food among the umbelliferous herbage that flourished on the canal-banks. The species is much more abundant here than we before supposed it to be; indeed it is quite common, though local, and we never visited its haunts without seeing many examples. Jaubert and Barthélemy-Lapommeraye considered it to be rare in Provence.

ANTHUS CAMPESTRIS.

We found the Tawny Pipit not uncommon in May and early June 1894, in the southern arid portion of the Camargue, and regarded it as a summer visitor to the Delta. In the autumn of 1896, we only observed a single individual in that region. This species is mentioned here chiefly for the purpose of quoting Jaubert and Barthélemy-Lapommeraye's views, which are opposed to our experience of the bird in

the Camargue. These authors state (p. 287) that this species occurs on passage in Provence in April and September, and that it is common in summer in the Hérault, Var, and Basses-Alpes. To these Departments should be added the Bouches-du-Rhône.

ORIOLOUS GALBULA.

A solitary female Golden Oriole was observed among the trees in the north-east of the Camargue on the 20th of September. We saw only a single male in May 1894. Jaubert and Barthélemy-Lapommeraye say that the Oriole is a common bird in Provence at the periods of migration, and that it breeds in nearly all the southern Departments.

LANIUS POMERANUS.

The Woodchat was the only Shrike seen during this autumnal visit. It was not uncommon, and was usually engaged in the pursuit of a Mantis and a large species of green grasshopper, which were both very abundant at the end of September.

Jaubert and Barthélemy-Lapommeraye state (p. 175) that *Lanius meridionalis* is a resident, and remains during great cold, and that it is principally to be found in the Crau and the Camargue. We did not observe the Southern Grey Shrike on either of our visits, and during the autumn of 1896 we did not see a "Grey" Shrike of any species: not even *Lanius minor*, which was so excessively common in May and June 1894.

*MUSCICAPA ATRICAPILLA.

The Pied Flycatcher is a bird of passage only in the Bouches-du-Rhône, and was one of the commonest passerine migrants that came under notice in September 1896. It was observed in large numbers among trees and bushes, including the tamarisks of the desert-region bordering the Mediterranean. It is worthy of note that all the very numerous examples seen were, without exception, in the plumage of the female. Doubtless many adult males were among them, but all had assumed their winter plumage prior to mid-September.

MUSCICAPA GRISOLA.

The Spotted Flycatcher is a bird of passage in the Delta and its neighbourhood, and was fairly common throughout the latter half of September in all parts of the Camargue and in the vicinity of Arles. Jaubert and Barthélemy-Lapommeraye (p. 195) say that it nests rarely in the South of France.

HIRUNDO RUSTICA.

The Swallow was abundant during our visit, and its numbers did not appear to have at all decreased by the beginning of October.

On September 15th we witnessed a considerable migratory movement, from the north, of Swallows and Sand-Martins. Just before sunset, as we stood on the high bank of the Petit Rhône, at the northern extremity of the Camargue, a great number of Swallows appeared, in continuous parties of about 100 individuals, all passing due south for the Mediterranean. This passage lasted for some three-quarters of an hour, and the birds flew at so low an elevation as to pass just above our heads, enabling us to distinguish readily that these troops of emigrants were composed of both old and young birds. During this movement the local Swallows were busily engaged in the pursuit of their insect-food over the waters of the Rhone, and appeared to be quite indifferent to what was taking place just above them.

***STURNUS VULGARIS.**

The Starling is a winter visitor in the south of France. We first observed it in some numbers near to Arles on the 24th of September, after which date we saw it quite commonly. Jaubert and Barthélemy-Lapommeraye state (p. 106) that it arrives in the Midi in numerous flocks during the first days of October.

CORVUS CORONE.

During a short stay at Les Saintes Maries, the Carrion-Crow was again observed to make daily visits to the village in search of offal. This species is undoubtedly a resident in some numbers in the southern portion of the Petite Camargue.

*CAPRIMULGUS EUROPEUS.

Several Nightjars were shot on passage in the Camargue during the latter part of September. It was evidently esteemed as a minor "game-bird" by the local sportsmen.

LYNX TORQUILLA.

We observed the Wryneck as a common bird of passage throughout our visit. It frequented and skulked in thick bushes by the side of the Rhone, and the wooded margins of the canals.

GECCINUS VIRIDIS.

The Green Woodpecker proved to be quite a common bird among the trees fringing the canals near Arles. We saw this species only on one occasion during our spring visit.

CUCULUS CANORUS.

Two adult Cuckoos were observed on the eastern border of the Camargue on the 16th of September, and were the only birds of this species seen.

*STRIX FLAMMEA.

One, seen at Villeneuve, in the Camargue, on September 19th, was the only Barn-Owl that came under our notice. This bird was observed in broad daylight on the top of a corn-stack, where it appeared to be busily engaged in the capture of prey.

*ATHENE NOCTUA.

A Little Owl was observed, on the evening of the 23rd of September, perched on a post at Balarin de Roure, in the Eastern Camargue. It seemed to be fearless, and allowed a close approach.

*ASTUR PALUMBARIUS.

A Goshawk was well seen on September 18th near the bank of the Petit Rhône, in the north of the Delta. Jaubert and Barthélemy-Lapommeraye say (p. 64) that this species is rare on passage, but that young individuals are killed at the time of the passage of flocks of Pigeons.

*ACCIPITER NISUS.

The Sparrow-Hawk did not come under our notice in the spring of 1894, but it was not uncommon as a bird of passage in September 1896, and chiefly in the vicinity of the trees that fringe the Rhônes and the canals. There was a marked passage of birds of prey of several species towards the close of the month of September.

FALCO SUBBUTEO.

The Hobby was common on passage, and was observed in all districts of the Delta down to the shore of the Mediterranean.

FALCO TINNUNCULUS.

The Kestrel was also abundant as a migrating species, and several were frequently seen on the wing simultaneously.

PANDION HALIAËTUS.

The Osprey was observed in numbers, especially on the étangs and in their neighbourhood. On September 19th, at the Étang de Giraud, four were seen together on the wing. On the 23rd of the same month one formed a conspicuous object, as it rested on the mud close to the water's edge on the Étang Consécanière. This bird subsequently took wing, and, after sailing over the étang for a few moments, pounced down upon and captured a large cyprinoid fish in water that was not more than a foot deep.

ARDEA CINEREA.

The Heron is both a winter visitor and a bird of passage in the Bouches-du-Rhône, and was abundant during the period covered by our visit. Only a single example was seen by us in May 1894.

Jaubert and Barthélemy-Lapommeraye say (p. 358) that the Heron was at one time resident in the Midi, but that since the clearing of a part of the Camargue it has been little more than a bird of passage.

ARDEA PURPUREA.

The Purple Heron was not nearly so common in the autumn as it was in the spring. At the latter season it was abundant, and was probably nesting.

*CICONIA ALBA.

On the 23rd of September we found, near the margin of the Étang Consécanière, the remains of a White Stork in a fair state of preservation. Jaubert and Barthélemy-Lapommeraye state (p. 354) that this bird is always rare in Provence.

PHŒNICOPTERUS ROSEUS.

During this second visit to the Camargue we obtained some additional information of interest regarding the Flamingo. This has led us to modify our estimate regarding the number of these birds summering in the Delta.

On the 19th of September we visited, for the first time, the series of lagoons at Giraud, and which lie in the south-east of the Delta. Here we found a colony of some 500 or 600 Flamingoes, and doubtless many more were in other suitable localities there which we were unable to reach. We had not expected to find a herd of these birds at Giraud, since there is an extensive "salt-pan," and hence a considerable population—a disturbing element to bird-life. It was the discovery of this herd that led us to modify our estimate of the Flamingo population of the Camargue, and we now regard it as ranging from 1000 to 1500 individuals.

It is much to be feared that the great increase in the population in the Giraud district, already alluded to, will entirely prevent these birds from incubating. The peasants, French and Italian, employed at the salt-pan are extremely poor, as is evidenced by the mean reed-huts in which they dwell with their families; and there can be no doubt that the eggs are much sought after and consumed largely for domestic purposes.

On the 20th of September we visited the east shore of the Étang Valcarès. Here we found these birds very numerous, some 600 or 700 of them being in view. They were feeding in thin lines, which extended, with few breaks, for several miles. On this same shore, and about 50 yards from the edge of the water, then much shrunk owing to a prolonged spell of drought, were nearly 100 nests, still so fresh

that they could have been formed only a few months before. These were arranged in groups of about 20 nests, placed close together, and the groups were about ten yards from each other. The structures had the appearance, when seen from a short distance, of hillocks. Some of them were quite a foot in height, but the majority were about 9 inches, and each was some 12 inches in diameter. Near by were the remains, or rather signs, of numerous nests of a previous year, now simply represented by mounds of mud. Here we had evidently one of the chosen breeding-grounds of the Valcarès Flamingoes, but unfortunately the site selected was within view of the lonely cabane of that singular individual Marius, already mentioned, and by whom their nests had been robbed, no doubt, to their last egg.

That more than very few—indeed that any—young Flamingoes are reared annually in the Camargue is extremely doubtful. We saw and carefully examined at least a thousand of these birds during this September visit, but not a single young or immature bird was to be detected in their ranks. This in itself was melancholy evidence of the fate which awaits these birds in the Bouches-du-Rhône. In September we found these birds more widely distributed than they were during the breeding-season, and we observed them on the waters of Consécanière, an étang on which we did not observe a single bird during the spring of 1894.

Regarding the food of the Flamingo in the Camargue, there can be no doubt as to the correctness of the views expressed on this subject in my former contribution. The conclusions arrived at were based upon observations during the breeding-season, when the birds were entirely confined to the lagoons. In these shallow lakes not a vestige of vegetation was to be found, and the animal life of their extremely saline waters consisted only of myriads of the brine-shrimp (*Artemia salina*); it is undoubtedly upon this little crustacean that the Flamingo feeds in the lagoons of the Camargue.

The legs of this bird appear to undergo a seasonal change in colour. In May and June we noted them as being reddish-

pink, but in September the legs of all were a livid magenta-pink.

We have no particulars regarding the departure or arrival of the Flamingoes in the Delta. Mr. William Berry, however, observed them on Valcarès on the 5th of April, 1898.

ANAS BOSCAS.

The Mallard was extremely abundant on the Étangs, and have evidently received immense additions from the north. On the 23rd of September several thousands were observed, along with a vast horde of other Ducks of various species, on the Étang Consécanière. All the drakes were in brilliant full plumage; but it may be remarked that this was not the case with the males of some of the other species which were present.

*SPATULA CLYPEATA.

There were quite a thousand Shovelers on the Étang Consécanière on the 23rd of September. When first seen they were in a pack by themselves, resting in the shallow water; when on the wing, however, they associated with the other species. We had an excellent view of them as they rested in water about an inch deep, and were able to note that not a single drake was in full plumage, but were all much dappled in appearance. This species is a winter visitor to the Delta, and also a bird of passage.

DAFILA ACUTA.

Not a few Pintails were observed among the great flight of Ducks seen at Consécanière on September 23rd, and it was evident that this bird had already arrived in considerable numbers.

*QUERQUEDULA CRECCA.

There were several hundreds of Teal among the fowl seen on Consécanière on September 23rd. This species, we believe, is a winter visitor to the Delta; a few, however, are said by Jaubert and Barthélemy-Lapommeraye to breed in the Midi.

QUERQUEDULA CIRCIA.

The Garganey was abundant on the Étang Consécanière on September 23rd. It is chiefly a bird of double passage in the Camargue. Jaubert and Barthélemy-Lapommeraye say (p. 514) that it visits the Midi principally in the spring, but nests little there.

*MARECA PENELOPE.

Among the thousands of Ducks seen on Consécanière on September 23rd were many hundreds of Wigeon. This bird would appear to arrive early in the Midi, for Jaubert and Barthélemy-Lapommeraye state that it reaches Provence during the first days of September.

FULIGULA RUFINA.

We were somewhat surprised at the number of Red-crested Pochards seen in association with the other species of Anatinae on the Étang Consécanière on the 23rd of September. A pair observed on the Mediterranean the previous day was busily engaged diving in search of food. The males were still in eclipse plumage.

*COLUMBA GENAS.

We first noted the Stock-Dove on the 28th of September, on which date we saw about fifteen, in small parties, and after this the species was not uncommon. It is a winter visitant to the Delta, and doubtless also a bird of passage. It is said to arrive in great numbers and to remain in the wooded regions of Provence.

TURTUR COMMUNIS.

The majority of the Turtle-Doves had evidently departed from the region, to which the species is an abundant summer visitant, for we observed only two examples, and these on the 16th of September.

PERDIX CINEREA.

We did not observe the Partridge during our autumn visit, though we saw it on two occasions in May 1894, and Mr. William Berry saw a pair, close to where we first observed the bird, in April 1898. Our sporting friends at

Arles expressed great surprise on our telling them that we had found this bird in the Delta, and said they were not aware of its presence there. In this connection it may be interesting to quote Jaubert and Barthélemy-Lapommeraye (p. 422). These authors say, "We scarcely know it in Provence. Those which breed on the banks of the Rhone and in the valley of the Duranee become scarcer there each year."

COTURNIX COMMUNIS.

Our friend M. Rosseau, of Arles, informed us that great numbers of Quail arrive on the Mediterranean shores of the Camargue in the spring, and that the birds are so exhausted on their advent that they may be killed with a stiek. This information leads one to conclude that these birds cross the Mediterranean in the longitude of the Rhone, otherwise they would hardly arrive in such an exhausted condition. We saw very few Quail during our visit.

*CREX PRATENSIS.

Quite a number of Land-Rails were shot in the Delta on the 19th of September, and the bird seemed to be abundant about that date; it is of double passage only.

EDICNEMUS SCOLOPAX.

The Stone-Curlew has been already mentioned as one of the species which we did not observe, though it was extremely common during the breeding-season. This little experience rather tends to bear out the statements of Jaubert and Barthélemy-Lapommeraye (p. 441), that it is to be found in the Camargue and the Crau *in summer*.

The Avocet (*Recurvirostra avocetta*) was still present in its haunts in the Delta on the 23rd of September.

*GALLINAGO MAJOR.

On September 19th a Great Snipe was seen at close quarters among some rough ground at Giraud, in the south-east of the Delta. Jaubert and Barthélemy-Lapommeraye say (p. 481) that this species is rather rare on passage in Provence.

TOTANUS HYPOLEUCUS.

The Sandpiper is a bird of passage in the Bouehes-du-Rhône. One was heard passing southward down the Rhône on the night of the 16th of September.

*TOTANUS OCHROPUS.

The Green Sandpiper was fairly numerous on the margins of the freshwater pools at Giraud on the 19th of September. It is a bird of double passage in the region, according to the authors of 'Les Richesses.'

*TOTANUS GLAREOLA.

Several Wood-Sandpipers were seen on some marshy ground with pools of water at Giraud on the 19th of September. It is said by Jaubert and Barthélemy-Lapommeraye (p. 461) to visit the entire Midi in flocks in spring, more rarely in the autumn.

TOTANUS CALIDRIS.

The Redshank was present in great numbers on the margins of the Étangs throughout the Delta. It was abundant in May 1894, when we had little doubt that it was breeding, though Jaubert and Barthélemy-Lapommeraye consider (p. 458) that it is a bird of passage, and that there is no reason to suppose that the bird nests in the South of France—an opinion of which we much doubt the accuracy.

TOTANUS FUSCUS.

Many Spotted Redshanks were observed on the margins of a freshwater Étang named Le Taute, in the south-western portion of the Delta, on the 23rd of September. Several other species of Waders were also present, attracted, no doubt, by the fresh water, the lagoons being very shallow, and hence extremely salt.

TOTANUS CANESCENS.

The Greenshank was common on passage from the middle down to the end of September. It was observed on the margins of the Rhones and on the Étangs throughout the Delta, but was always seen singly.

*LIMOSA BELGICA.

There were many Black-tailed Godwits on the shores of the Étang Le Taute on the 23rd of September. The species is of double passage in the region.

NUMENIUS ARQUATA.

The Curlew is a bird of double passage in the Camargue, and was common during the period covered by our visit. Jaubert and Barthélemy-Lapommeraye say (p. 473) that a few nest in the Camargue; but although we saw a number on the shores of the Golfe de Fos on the 30th of May, 1894, we had no suspicion that the species was breeding in the Delta that season.

XLII.—On the Dates of Temminck and Laugier's 'Planches coloriées.' By C. DAVIES SHERBORN.

IN 'The Ibis' for 1868 (p. 500) Mr. G. R. Crotch gave a list of the dates of the livraisons of Temminck and Laugier's 'Nouveau Recueil des Planches coloriées d'Oiseaux.' Information, then unknown, has since come to my hand, and Professor Newton has recently acquired an unbound copy of the work, with several of the original wrappers preserved. These wrappers, of which there were four separate issues, and which are usually dated "182-," have furnished valuable facts, and have largely assisted this revised compilation. Férussac's 'Bulletin général' (1823), and its continuation, the 'Bulletin des Sciences Naturelles et de Géologie' (1824-31), provide much of the matter upon which the present statement is prepared, and this in its turn is supplemented by the Donation Book of the Linnean Society of London, which has so frequently been of service in my bibliographic enquiries.

The accuracy of the present determinations up to and including livraison 55 is proved in a curious manner by a footnote in Férussac, Bull. ii. (1824) p. 293, where the reviewer, Jean René Constantin Quoy, notes the date of the livraison containing the new generic word *Megapodius*